SYSTEM AND METHOD FOR ROUTER ARBITER PROTECTION SWITCHING

ABSTRACT OF THE DISCLOSURE

In a router with redundant central arbiters, a set of control processors (CPs) determines which arbiter is active, which is standby, and when to switch between them. In normal operation ingress ASICs issue requests to the active central arbiter ASIC and keep-alive requests cyclically once per chunk period to the passive arbiter ASIC, which then returns keep-alive grants through the same links to the ingress ASICs and sends standby configuration information to the optical switch ASICs. The arbiter ASICs pass a switch-over decision simultaneously to the optical switch ASICs and ingress ASICs, which empty all queues of outstanding requests, and then resend all of those requests to the new active central arbiter after all queues are empty, such that no router traffic is lost. Mechanisms ensure that during the transition the ASICs properly recognize which data links are healthy and which arbiter is active.

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